

# Daily GLOWBUGS

## Digest: V1 #21

via AB4EL Web Digests @ SunSITE

**Purpose: building and operating vacuum tube-based QRP rigs**

[AB4EL Ham Radio Homepage @ SunSITE](#)

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%%%% GlowBugs %%%%% GlowBugs %%%%% GlowBugs %%%%% GlowBugs %%%%%

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**Subject: glowbugs V1 #21**

**glowbugs**

**Friday, May 2 1997**

**Volume 01 : Number 021**

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Date: Thu, 1 May 1997 08:43:27 -0700 (MST)

From: Jeff Duntemann <jeffd@coriolis.com>

Subject: Re: AN/GRC-109

At 04:04 PM 4/30/97 -0700, you wrote:

>On Wed, 30 Apr 1997, Brian Carling (Radio G3XLQ / AF4K) wrote:

>

>> Is Fair Radio completely out of these things?

>> They were selling them cheap last year and I was about to buy one but

>> they dropped the ad!

>

>They still have complete sets. I called about 2 weeks ago. Their '97

>catalogue still has them listed.

Lotsa chatter about this unit, which I've never seen and know nothing about. Could someone who has one or knows it characterize this radio? I've never owned a military set (apart from any number of Command chassis with nothing much left on 'em) and might like to get one.

- --73--

- --Jeff Duntemann KG7JF  
Scottsdale, Arizona

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Date: Thu, 1 May 1997 08:55:52 -0700 (PDT)

From: Ken Gordon <keng@uidaho.edu>

Subject: Re: Svetlana Tube

I remember Walt Polete of Lolo, Montana built a 300 watt crystal oscillator by judicious use of an 813 in an electron coupled circuit.



Moscow, Idaho 83843  
(208)-882-8745

Great Highland Pipes, Amateur Radio, Electronic Consulting, Home-Schooling  
Traditional Roman Catholic

Moscow, Idaho 83844  
(208)-885-6133

My PGP Public Key Upon Request.

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Date: Thu, 01 May 1997 09:36:26 -0700  
From: Walt Turansky <turansky@xroads.com>  
Subject: Re: Svetlana Tube

At 09:15 AM 5/1/97 -0400, you wrote:

>Seeing the blurbs over the last couple days about Svetlana tubes reminded me  
>of a project on my list of things to do. I'm ordering an SV811-10 today. Hate  
>to spend 30 bucks on a tube but I'd like to have a bit more than the approx.  
>2.5 watts output that I get when using 6SN7's and such in Hartleys.

I've been running an 80 meter Hartley with a 6336A and getting about 6-7  
watts out so I've been thinking along the same lines. Last week I was given  
an HF-100 (T-100) 75 watt triode that I am planning to build a 40 meter  
Hartley with. Yesterday, I ordered an 812A pull from CWest for \$15.75 to  
put in the 80 meter Hartley. I will also report the results.

73 de N7QFN  
Walt

---

Date: Thu, 1 May 1997 14:05:18 -0400 (EDT)  
From: EWoodman@aol.com  
Subject: Re: Svetlana Tube

Walt,  
I had thought about a 40M Hartley. I've only used them on 80 and 160 and was  
a bit concerned about stability and such on anything higher. I know others  
have run them up on 30M recently and even higher in the "old days". Maybe  
with good rock solid construction .....? Mine are all built like tanks  
anyway!

73 Eric KALYRV

---

Date: Thu, 01 May 1997 11:26:38 -0700  
From: Walt Turansky <turansky@xroads.com>  
Subject: 40M Hartley (was Svetlana tube)

Eric,

I have the same concern on stability and haven't tried it yet so maybe Bob  
or someone else that's tried it can comment. My 80M is built on a  
breadboard and wired with #12 buss wire. I used transmitting mica tubs for  
fixed caps and variables were pulled from a TU-7 tuning unit. The tank coil  
is 1/4" copper tubing. I intend to replicate this construction on the 40M

version.

>I had thought about a 40M Hartley. I've only used them on 80 and 160 and was  
>a bit concerned about stability and such on anything higher. I know others  
>have run them up on 30M recently and even higher in the "old days". Maybe  
>with good rock solid construction .....? Mine are all built like tanks  
>anyway!  
73 de N7QFN  
Walt

---

Date: Thu, 1 May 1997 12:27:39 -0600 (MDT)  
From: owens@stout.atd.ucar.edu (Chip Owens)  
Subject: e-mail address for Fair Radio

Hi There,

Could someone please send me the e-mail address for Fair Radio?  
I'm sitting out here in the oilfields of Kansas and don't have any  
search engines available-lucky to be able to do e-mail over a very  
slow modem, Has anyone received the new Fair catalog?

Thanks! Chip Owens, NW00

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Date: Thu, 1 May 1997 11:50:28 -0700  
From: "James H. Haynes" <haynes@cats.ucsc.edu>  
Subject: Re: e-mail address for Fair Radio

fairradio@alpha.wcoil.com

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Date: Thu, 1 May 1997 20:43:13 +0000  
From: Sandy W5TVW <ebjr@worldnet.att.net>  
Subject: Re: 40M Hartley (was Svetlana tube)

At 06:26 PM 5/1/97 +0000, you wrote:

>>I had thought about a 40M Hartley. I've only used them on 80 and 160 and was  
>>a bit concerned about stability and such on anything higher. I know others  
>>have run them up on 30M recently and even higher in the "old days". Maybe  
>>with good rock solid construction .....? Mine are all built like tanks  
>>anyway!  
>73 de N7QFN  
>Walt  
>  
> I have one using a single '10 from a 1928 ARRL Handbook design. I  
have the tank coils interchangeable. (They are screwed down to ceramic  
pillar standoffs)  
The cathode tap is by means of a small Mueller #45C copper battery clip. It is  
very stable as far as thermal drift goes. I power it with a Heathkit IP-17

regulated  
power supply using 6.3v. AC on the filament (going to 7.5 volts makes no  
difference!)

and 400-425 volts on the plate. The oscillator works very well on 40!  
(With the big 5 turn tank coil) I think it would probably work on 30  
meters too, but I haven't tried it yet! I think any of the "big" receiving  
triodes would work OK.

73,  
E. V. Sandy Blaize, W5TVW  
"Boat Anchors collected, restored, repaired, traded and used!"  
417 Ridgewood Drive,  
Metairie, LA., 70001  
ebjr@worldnet.att.net  
\*\*Looking for: 860 tubes, WL-460 tubes\*\*  
\*\*Butternut HF2V antenna, G-R test gear.....\*\*\*

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Date: Thu, 1 May 1997 14:25:36 -0700 (PDT)  
From: Ken Gordon <keng@uidaho.edu>  
Subject: Re: e-mail address for Fair Radio

On Thu, 1 May 1997, Chip Owens wrote:

> Hi There,  
>  
> Could someone please send me the e-mail address for Fair Radio?

Their e-mail address is:

fairradio@alpha.wcoil.com

URL is

<http://alpha.wcoil.com/~fairradio/>

> I'm sitting out here in the oilfields of Kansas and don't have any  
> search engines available-lucky to be able to do e-mail over a very  
> slow modem, Has anyone received the new Fair catalog?

I have their 1996 catalog and their fall 1996 supplement. New catalog due  
out soon.

Ken W7EKB.

Every time I get a new one, I do through it and after my order reaches  
\$10,000, I say to myself, "Oh, well...maybe next time." :-)

---

Date: Thu, 1 May 1997 16:47:36 -0700 (PDT)  
From: Ken Gordon <keng@uidaho.edu>  
Subject: Re: 40M Hartley (was Svetlana tube)

You wouldn't just happen to have a schematic/pictures/etc? It sounds like  
fun. 1/4" copper tubing should make a nice tank coil. Is this a TPTG

design or a straight Hartley VFO ?

Do you use an antenna coupler between it and the antenna? Does it chirp?

Where do you key it? Cathode?

I wonder if I could get one of my old 304TLs to work in such a circuit?  
Probably get killed in the process! :-)

Lessee...I have some 8000s, an 811 or two, some 805s and some 803s, and power supplies for them.

73,

Ken W7EKB

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Date: Fri, 02 May 1997 01:35:02 GMT  
From: wallace@world.std.com (Andy Wallace)  
Subject: 1935 Shortwave Digest -- Free! (with catch)

Hmm. A fellow at our local SWL club passed this on to me a while ago.=20  
I finally took the time to look it over.

Seems like an interesting little (5x7") mag by E. A. Conklin. This one is 50 pages long and has ads for things like the RME-69, Patterson PR-16, The New Super Skyrider, and the Eilen HFA-35 transmitter. (There's a new one for your wantlist, John Brewer!)

Articles review the Halli Super Seven, RCA AR-60 (darn, I passed one of those up for \$15 two years ago), and the RME-69, and McMurdo Silver does a review of Jones' SUPER GAINER 3-tube superhet/regen but Conklin forgot to include the schematic!

Anyway, a handful of interesting reading. Free to someone who will send me something interesting to read in return! An old copy of Short Wave Craft (need not be mint), a schematic of their favorite glowbug or regen project, what have you? Unfortunately I only have one copy so I may entreat the "winner" with a list of people to pass the copy on to after he/she is done!

Email address is below.=20

- --Andy  
wallace@world.std.com  
- ---  
Curly: Oh....short wave?  
Moe: No! Poimament.=20  
<BONK!>  
(THEY STOOGE TO CONGA, 1943)

---

Date: Thu, 01 May 1997 21:48:04 EDT  
From: ac4gt@juno.com (nathan c tart)

**Subject: TEST**

TEST of the ROUND ROBIN  
End

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Date: Thu, 1 May 1997 20:57:23 -0500 (CDT)  
From: mjsilva@ix.netcom.com (michael silva)  
Subject: Re: AN/GRC-109

I'm not familiar with this set but I did look it up in the Fair Radio catalog and it has a very familiar-sounding tube lineup: 6AC7 (kind of a baby VHF 6AG7) and 2E26 (kind of a baby VHF 6L6). Sounds like a Novice-style rig with 15 and 10 meter ambitions. Perhaps somebody could scan or otherwise enter the circuit and add it to the growing glowbugs collection.

73,  
Mike, KK6GM

---

Date: Fri, 2 May 1997 03:39:12 EST  
From: k7sz@juno.com (Richard H. Arland)  
Subject: Re: AN/GRC-109

Gang:

The AN/GRC-109 is a late 50s thru mid 60s military radio set used by US Special Forces and the CIA (although the CIA version is slightly different on the TX and is called, I believe, the RS-1)

The T-784/GRC-109 TX puts out about 10 to 15 watts of CW only covering 3-22 mc in four bands. It is xtal controlled (FT-243 or the larger rocks....the smaller HC-16 or 25 holders won't work) and has a straight key afixed to the top. Tuning is done by small lamps that are tuned for max brightness by the "Exciter", "PA", and "Antenna" tuning controls. The primary difference between the RS-1 (CIA version) and the T-784./GRC-109 (Green Beanie version) is the AN/GRA-71 (Angry-71) burst encoder which allows the clandestine operator to preload his CW mssg (encrypted, of course) and fire it off in a 300 WPM burst. Tube compliment: Osc: 6AC7, PA: 2E26.

The R-1004/GRC-109 RX is a 3-22 mc (in 3 bands) superhet receiver that uses 1 volt tubes. It features a VERY nice vernier tuning control and fairly accurate analog readout. It has a 6dB bandwidth of about 9 kc and will receive CW/AM or SSB. It uses 2K ohm headphones and can be used with a separate antenna or coupled to the T-748 transmitter by a short jumper to use a single antenna. Tube compliment: RF Amp: 1T4, Mixer: 1L6, 1st IF Amp: 1T4, 2nd IF Amp: 1T4, Detector/AF: amp 1U5, BFO: 1T4.

AThe PP-2684/GRC-109 psu (also called the "large power supply") is a 75-260 volt AC (40-400 cps) power supply that can also work from a 6 volt DC battery (has an internal vibrator supply) and supplies 450 VDC to the

TX along with 108 VDC to the receiver and associated filaments and bias voltages. In addition, this psu can also be coupled to the G-43G hand crank generator to supply power to the GRC-109 radio set. This sucker weighs a ton!

The PP-2685/GRC-109 psu is the "small power supply" and has all the features of the PP-2684 EXCEPT for the 6 volt DC input and associated vibrator supply. and it cannot be operated from the G-43G hand crank generator. It is an AC ONLY psu.

These radios sets are available from Fair Radio Sales....cost me about \$130 for the three pieces and shipping. They are used...the ad in the catalog says they are "used repairable" but my stuff worked fine right out of the box. This is NOT a very portable set.....it is more "luggable" than "portable".

They are a real hoot to use. Brings out the Walter Mitty in all of us!

73 rich K7SZ

---

Date: Fri, 02 May 1997 00:45:40 -0800

From: "catherine a dumar westelcom.com" <cjdumar@westelcom.com>

Subject: Re: AN/GRC-109

:I'm not familiar with this set but I did look it up in the Fair  
:Radio catalog and it has a very familiar-sounding tube lineup:  
:6AC7 (kind of a baby VHF 6AG7) and 2E26 (kind of a baby VHF 6L6).  
:Sounds like a Novice-style rig with 15 and 10 meter ambitions.  
:Perhaps somebody could scan or otherwise enter the circuit and add  
:it to the growing glowbugs collection.  
:73,  
:Mike, KK6GM

the thing is marginal at 15M and worthless on 10M (refering to mine). Where the rig shines is on 80, 40, 30, and 20M.

Charlie, KA2VCS (cjdumar@westelcom.com)

Graphic Artist seeks Boss with vision impairment.

Net-Tamer V 1.09 Beta - Registered

---

Date: Thu, 1 May 1997 23:20:31 -0700 (PDT)

From: Ken Gordon <keng@uidaho.edu>

Subject: Re: AN/GRC-109

> I'm not familiar with this set but I did look it up in the Fair Radio  
> catalog and it has a very familiar-sounding tube lineup: 6AC7 (kind of  
> a baby VHF 6AG7)

6AG7 has much higher transconductance and plate dissipation. Otherwise,



6AC7 makes an excellent oscillator.

> and 2E26 (kind of a baby VHF 6L6).

Actually, a baby 6146.

> Sounds like a

> Novice-style rig with 15 and 10 meter ambitions.

Won't do 10 meters. Goes to 24 MHz. Is "hollow-state" so relatively impervious to EMP.

> Perhaps somebody

> could scan or otherwise enter the circuit and add it to the growing

> glowbugs collection.

Hmmmmmm. I have the complete manual. Could scan the schematics of rx, tx and powersupplies. Where would I put them?

73,

Ken W7EKB

---

Date: Thu, 1 May 1997 23:45:02 -0700 (PDT)

From: Ken Gordon <keng@uidaho.edu>

Subject: Re: AN/GRC-109

Gang:

This unit will use the same power sources as the older AN/GRC-9, including its GN-58 Hand cranked genny, the little gasoline powered generator (which I forget the nomenclature for), and the 6/12/24 volt dynamotor. There is even a cable with a little box in it containing a 108 volt regulator tube to go between the GN-58 and the R-1004/T-784.

Kenneth G. Gordon W7EKB

226 N. Washington St.

Moscow, Idaho 83843

(208)-882-8745

Great Highland Pipes, Amateur Radio, Electronic Consulting, Home-Schooling  
Traditional Roman Catholic

College of Mines and Earth Resources

//or//

University of Idaho

Moscow, Idaho 83844

(208)-885-6133

My PGP Public Key Upon Request.

---

Date: Thu, 1 May 1997 23:46:17 -0700 (PDT)

From: Ken Gordon <keng@uidaho.edu>

Subject: Re: AN/GRC-109

Gang:

I have worked 35 countries with mine, mostly on 40, some on 20, ONE on 15. It won't do 10.

My PGP Public Key Upon Request.

At 11:50 AM 5/1/97 -0700, you wrote:  
>fairradio@alpha.wcoil.com

>  
>

Their WWW page is:

<http://alpha.wcoil.com:80/~fairradio/>

-- Roy Morgan/Building 820, Room 517/Gaithersburg MD 20899  
(National Institute of Standards and Technology)  
301-975-3254 Fax: 301-948-6213 morgan@speckle.ncsl.nist.gov --

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Date: Fri, 02 May 1997 10:28:52 -0400  
From: Roy Morgan <morgan@speckle.ncsl.nist.gov>  
Subject: Re: AN/GRC-109

At 03:39 AM 5/2/97 EST, you wrote:

>Gang:

>

>The AN/GRC-109 is a late 50s thru mid 60s military radio set used by US  
>Special Forces and the CIA

(great info snipped)

>

>They are a real hoot to use. Brings out the Walter Mitty in all of us!

A friend of mine has one of these sets. We are fortunate to live in the Washington, DC area, and because of this we were able to properly test the set. Our experiences may be of interest to other Glowbuggers. The most desirable conditions for operation are illustrated below:

1) We found a proper location, across the Potomac River from the DIA headquarters compound, in a swampy drainage ditch beneath the George Washington Expressway, in the vicinity of the Pentagon. The knee-deep muck and thick summer vegetation provided a fine ground connection, and camouflage, respectively. The pitiful condition of the roadway overhead caused the heavy traffic to occasionally throw stones onto our heads, thus simulating more fully the original 1960's operating conditions.

2) Power source: We had scouted the site earlier and discovered a smashed lamp pole with exposed power wires. A couple of battery clips and a 100-foot length of zip cord allowed us to operate the rig on the ac power supply.

3) Antenna installation: Because of construction on the Parkway, a medium sized trailer had been parked in the trees near the operating swamp. A thin insulated wire snaked through the underbrush was connected to the corner of the trailer. For grounding, we simply pushed the transmitter half way down into the mud at the edge of the water-filled ditch. The whole system seemed to load up pretty well.

4) Operations: The one and only QSO we managed is recorded below, with certain parts redacted in accordance with applicable security regulations:

CQ CQ CQ DE SW3AMP SW3AMP

(nothing heard)

CQ CQ CQ DE SW3AMP SW3AMP

(VERY strong signal appeared on the frequency, with no discernable tuning up.):

SW3WAM DE BOSS SW3AMP DE BOSS K

BOSS DE SW3AMP R R FB SIG OM BT HWCOPY? BOSS DE SW3AMP

SW3AMP DE BOSS AUTHENTICATE T6U2Q K

BOSS DE SW3AMP R R SRY OM UNABLE TO AUTHENTICATE BT CODE BOOK FELL IN SWAMP  
BT HW COPY K

SW3AMP DE BOSS R R WAIT OUT

At this time, there was a long pause in the transmission, and we noticed the sound of sirens, apparently coming from the direction of the South Parking Lot at the Pentagon. We held a short tactics discussion, and decided to QRT for the day. We hastily packed up our station, and headed for the Crystal City Marriot for refreshments.

Keep em glowing!

Roy, K1LKY since 1959.

-- Roy Morgan/Building 820, Room 517/Gaithersburg MD 20899  
(National Institute of Standards and Technology)  
301-975-3254 Fax: 301-948-6213 morgan@speckle.ncsl.nist.gov --

---

Date: Fri, 2 May 1997 08:20:36 -0700 (PDT)  
From: tomrice@netcom.com (Tom R. Rice)  
Subject: Xtal Group Buy: Time's Running Out

Forwarded message:

>

> > Subject: CRYSTAL GROUP BUY

> > From: n0acs@juno.com (John R. Morris)

> > Date: Fri, 02 May 1997 00:12:27 EDT

> >

>

> > I was wondering if you could post a msg. over on the boatanchors for me  
> > to the effect that I am honoring xtal group buy orders postmarked thru  
> > Sat. 3rd. of May. That there's only 2 days left to order.

>

> > I've appreciated the orders I've gotten from their group and wanted to be  
> > sure they all had an opportunity to get their orders placed before the  
> > deadline ran out.

>

> > Also thank them for their support.

>

> > 73 John-PHOENIX CRYSTALS

> >

> The group buy referred to concerns greatly reduced  
> prices for a set of xtals. If you are interested,  
> please e-mail John at the above address for details.  
>  
> He doesn't have sufficient I-net access for him to  
> actually be on the list.  
>  
> 73 de WB6BYH  
>  
> --  
> "Start off every day with a smile and get it over with." --W.C.Fields  
> Tom R. Rice  
> tomrice@netcom.com  
> CIS: 71160,1122

---

Date: Fri, 2 May 1997 08:23:11 -0700 (PDT)  
From: Ken Gordon <keng@uidaho.edu>  
Subject: Re: AN/GRC-109

> >6AG7 has much higher transconductance and plate dissipation.  
> >Otherwise, 6AC7 makes an excellent oscillator.  
>  
> At 9000 and 11000 umhos they're both pretty anxious to please. I've  
> been told that the 6AC7 (which I haven't cut open) has the same  
> parallel plate construction as the 6AG7 (which I have -- it's one of my  
> "what's inside a tube" demos).

I was not aware of that. I like both tubes, but my favorite of the two is the 6AG7.

> >  
> >> and 2E26 (kind of a baby VHF 6L6).  
> >  
> >Actually, a baby 6146.  
>  
> When introduced in 1947 the RCA literature referred to the 2E26 as a  
> "very high frequency version of the 6L6". The 6146 didn't appear until  
> 5 years later.

Ah. I was not aware of THAT either! Thanks. I never really cared for the 6L6 as an oscillator because the suppressor grid is tied internally to the cathode which precludes stable ECO operation of it. As far as I was concerned, it is a bigger 6V6. They both make decent amps, but not so hot oscillators. The internal construction of the 2E26 is more similar to the 6146 than to the 6L6. Maybe it was an experimental, miniature, 6146 ?????? :-)

>  
> >> Perhaps somebody  
> >> could scan or otherwise enter the circuit and add it to the growing  
> >> glowbugs collection.  
> >  
> >Hmrrrrrrrr. I have the complete manual. Could scan the schematics of rx,  
> >tx and powersupplies. Where would I put them?  
>  
> NA4G seems to be the keeper of the glowbugs circuit archives. Bob, can

> you help out here?

I also administer an anonymous FTP site which has free hard-drive space if that would prove useful to this list.

73,

Ken W7EKB

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Date: Fri, 2 May 1997 11:24:38 -0400 (EDT)

From: EWoodman@aol.com

Subject: Re: Svetlana Tube

>Bob Keys has digitized a 1934 QST article, and added info for use of the  
>6SN7 tube.

I have a 160 rig based on that article and use a 6SN7 in it. Works fine. I also have one that is a very simple shunt-fed Hartley. I kind of like the shunt-fed ones because it keeps the hv dc off the tank circuit and is dirt-simple to build. Matter of fact if you use something like a 6CG7 (miniaturized 6SN7), a small B&W or Airdux type coil, and a small transmitting variable, you can make a nice midget shunt-fed Hartley that will fit in the palm of your hand and put out around 2 watts. Couple that with a midget regen also using a 6CG7 and you could put the whole station in your briefcase with room to spare!!

Eric

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Date: Fri, 2 May 1997 08:37:04 -0700 (PDT)

From: Ken Gordon <keng@uidaho.edu>

Subject: Re: AN/GRC-109

> At this time, there was a long pause in the transmission, and we noticed  
> the sound of sirens, apparently coming from the direction of the South  
> Parking Lot at the Pentagon. We held a short tactics discussion, and  
> decided to QRT for the day. We hastily packed up our station, and headed  
> for the Crystal City Marriot for refreshments.  
>

Hee hee! Neat story.

I recently did a search for "AN/GRC-109" and discovered a message from an old Sneaky Pete SFC about them. He called them " Lieutenant Powered" and recalled, with considerable affection how he had " ...made comm..." with headquarters in Georgia from an operation in Montana using a barbed wire fence for the antenna.

He told me that the later types weren't as good since they were not " ...full duplex..." (his words, probably meaning the same as "...full QSK.." to us), and they had to use two of them together to get the same results as one GRC-109.

Some fun!!!

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Date: Fri, 2 May 1997 10:41:18 -0500 (CDT)  
From: Chris Broadbent <cfb@bga.com>  
Subject: TEST - my messages aren't getting through

This is just a test. I sent two messages but have not seen them echoed.

Ah, the trials of modern technology :-).

- - -

Cheers,

Chris F. Broadbent ( KC5VQL )

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Date: Fri, 2 May 1997 09:03:30 -0700 (MST)  
From: Jeff Duntemann <jeffd@coriolis.com>  
Subject: AN/GRC-109

Hi gang--

Well, I just ordered my own AN/GRC-109 setup, thanks to the descriptions you all so graciously posted here. (Had to settle for the big power supply; the little ones are gone.) I have spares for all the tubes and room in the garage...but what sold me on it was the fact that it has a built-in straight key! I am definitely a straight key man. My father was in AACs in Atar, Mauritania during the War manning a weather/beacon radio station (or perhaps something more; he implied there were things about it he couldn't talk about) and used a bug. In Boy Scouts he tried to teach me Morse using a modern bug of uncertain manufacture (black iron base with a transparent plastic lid; the whole thing reminded me of a fat butter dish with a paddle) and I got nowhere. But when I fell back to the old black phenolic military straight key he had I was fine.

Some guys just don't do bugs, I guess. Morse for me is a vertical rhythm.

One other note on the AN/GRC-109. As far as I know there is no copyright on military manuals (unless they are training materials licensed from other publishers; McGraw-Hill did some of this long ago) so we could freely publish the circuit of the transmitter. It sounds simple enough for people to duplicate, assuming there are no really weird encapsulated assemblies or impossible-to-duplicate transformers. (Things like that are one reason I have steered generally clear of military gear for the last 25 years.) I see lots of used 2E26's at hamfests for a dollar or less, and all of them (so far) have tested good.

What would be the best way to run this thing off a car battery?

- --73--

- --Jeff Duntemann KG7JF  
Scottsdale, Arizona

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End of glowbugs V1 #21  
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%%%% GlowBugs %%%% GlowBugs %%%% GlowBugs %%%% GlowBugs %%%%

[AB4EL Ham Radio Homepage @ SunSITE](#)

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Created by **Steve Modena, AB4EL**  
Comments and suggestions to **modena@SunSITE.unc.edu**

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